

Laparoscopic Removal of a Perforated Intrauterine Device from the Perirectal Fat

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ABSTRACT

Background: The intrauterine device (IUD) was a very common form of birth control in the United States. The most serious potential complication of IUD use is uterine perforation. Uterine perforation is common among women with “lost” IUDs and can cause severe morbidity and mortality and should be carefully managed. The recommended treatment is removal of the perforating IUD. This can usually be managed laparoscopically unless bowel perforation or other severe sepsis is present.

Methods: An intra-abdominal IUD was removed laparoscopically from the perirectal fat of a 49-year-old women who had been diagnosed over 20 years earlier with an “expelled” IUD.

Conclusions: It is important that the possibility of uterine perforation be considered in anyone who has had a diagnosis of an expelled IUD without actual confirmation that the IUD is no longer present in the body. In any woman who presents with pelvic pain and a history of a “lost” IUD, the surgeon should have a high index of suspicion and obtain radiological studies. It may be advisable to question women about possible IUD use when they present with pelvic pain of unknown origin.

Key Words: Uterine perforation, Intrauterine device.

INTRODUCTION

The intrauterine device (IUD) has fallen out of favor in the United States, with less than one percent of American women now using an IUD for contraception.¹ However, in the 70s and early 80s, IUDs were in frequent use.^{2,3} Since patients depend on medical personnel for removal of this contraceptive device, there are probably a number of women who still may have IUDs in place.² In the absence of the sexually transmitted agents of salpingitis, IUDs are very safe and effective contraceptives, with rare complications.^{4,5}

Probably the most severe complication of IUD use is uterine perforation.⁶ It is common among women who have “lost” an IUD.⁶ Most of the time, such perforations are painless and benign.⁷ However, they can cause severe morbidity and mortality and, therefore, should be actively managed.⁸ Unfortunately, expulsion is often the diagnosis when the IUD string is not visible without careful determination of what has actually happened to the IUD.⁹ A perforated IUD can remain in the abdomen for years until the onset of more serious symptoms occurs.¹⁰⁻¹²

The recommended treatment for perforation of the uterus by an IUD is removal of the IUD.¹³ This can usually be managed laparoscopically unless bowel perforation or other severe sepsis is present.¹³

CASE REPORT

A 49-year-old gravida 5 para 3 abortus 2 woman presented with severe chronic pelvic pain and deep dyspareunia. She gave no history of IUD use. Endometriosis or pelvic adhesive disease were suspected. Exploratory laparoscopy was performed. No evidence of endometriosis was found, and the uterus, ovaries and tubes were within normal limits. Adhesions were found in the right upper quadrant, presumably from a previous cholecystectomy. The rectosigmoid colon was found to be adherent to the cul-de-sac. When those adhesions were separated, an intrauterine device of the Lippes Loop type was found imbedded in the perirectal fat (**Figure 1**). It was dissected free and removed (**Figure 2, 3**). There was no evidence of damage to the rectum. The patient recovered well and was free of pain.

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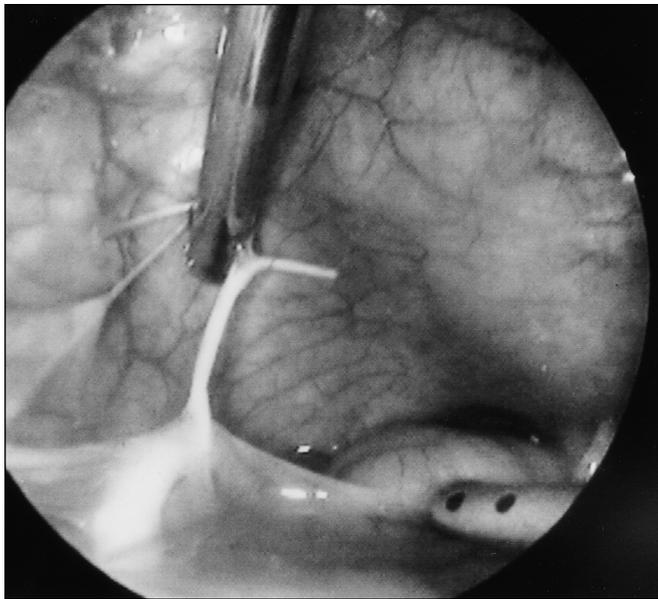


Figure 1. Lippes Loop IUD buried in the perirectal fat and adhesions.

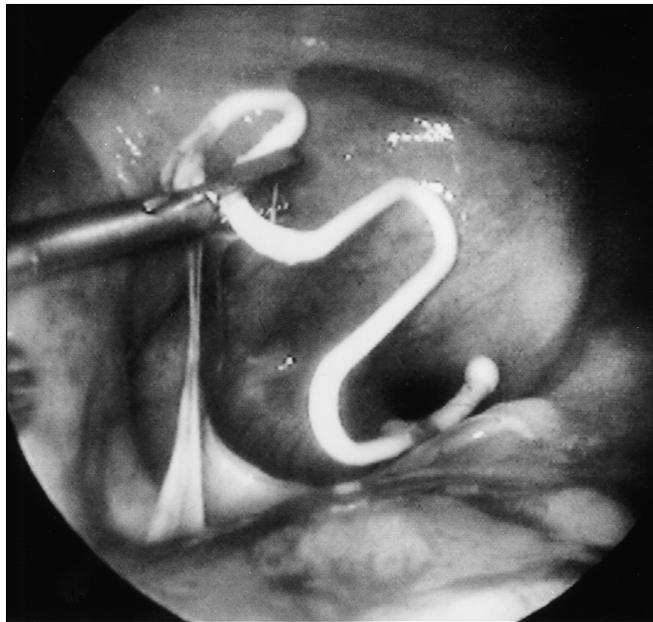


Figure 3. Lippes Loop almost completely dissected free.



Figure 2. Partially dissected Lippes Loop.

Postoperatively, further history was obtained from the patient. She recalled having an IUD placed approximately 25 years previously. She also remembered that she had experienced severe pain on insertion of the IUD. She had gone to a different doctor a week later and had been told that she must have expelled the device. Unfortunately, these records could not be obtained. However, the first incidence of right lower quadrant and pelvic pain of unknown origin listed in the patient's available records occurred 21 years before the surgery, several years after she estimated that her IUD was placed.

DISCUSSION

The IUD was a prevalent form of birth control in the United States and is still frequently used in other countries.^{2,3} Its use has declined in the United States in part because of litigation surrounding a specific IUD, the Dalkon Shield; this IUD had a strong association with pelvic inflammatory disease (PID), thought to be due to its multifilament tail.^{1,2} However, the newer IUDs are not associated with PID in the absence of sexually transmitted agents and are an effective form of birth control.^{4,5} They are relatively inexpensive per unit time and require minimal compliance by the patient to remain effective.

They are also long term and reversible.⁵ Most importantly, they are one of the most effective methods of preventing unwanted pregnancy.^{1,4,5} However, they do not protect the user from sexually transmitted diseases (STDs).⁴ They are generally safe, with few serious complications.^{4,5} However, uterine perforation remains a complication with the potential to be very serious.^{6,11}

Uterine perforation is an uncommonly reported complication of IUD use.^{3,5,6,14,15} When IUD types have been compared, no significant difference was found between rates of perforation.¹⁶ The general incidence of perforation for all types has been estimated at 1.2/1000.⁹ Uterine perforation most often is symptomless and is first suspected when the woman presents with unintended pregnancy or for removal of the IUD, and the strings cannot be located.¹² It is speculated that most perforations occur at the time of insertion, although some have proposed that perforations can arise secondarily as well.^{6,7} Most investigators believe, however, that the perforation must at least start at insertion.^{12,16,17}

Most perforations, fortunately, are uncomplicated.⁷ However, adjacent organs may become involved.⁶ If bowel strangulation and perforation occurs, the situation can quickly become life-threatening.⁶ Displaced IUDs have been known to penetrate the different organs of the pelvis, with the most commonly reported site of perforation being the colon.^{6,9,12} The bladder and the small bowel are other sites of perforation that can be life threatening.^{7,10,11,14}

Very often in the past, a missing IUD string was simply diagnosed as an unnoticed expulsion, and no further follow-up was done.^{8,9,17} Every case of missing IUD strings should be carefully followed up to exclude perforation as the cause, and the diagnosis of expulsion should never be made unless the physician has physical evidence (ie, the actual IUD, or a film showing no evidence of an IUD within the body) that the IUD is no longer present in the body.^{8,9,17} If this had been standard practice, some severe complications may have been prevented.⁸

In our case, greater than 20 years elapsed from the time the patient was diagnosed with expulsion and her treatment. A long duration of time between evidence of perforation and development of significant symptoms is not uncommon.¹⁰⁻¹² Because IUDs can be loose in the pelvis for long periods without causing complications, and

often cause no complications at all, in the past, it has been recommended that open IUDs not be removed unless complications ensue.^{7,13} However, more recently, the recommendation has been made that all perforated IUDs should be removed because of the severe morbidity and mortality that late complications may cause.¹³

In this particular case, since there was no history of a lost IUD prior to the laparoscopy for pelvic pain, no specific evaluation for a "lost" IUD was undertaken. The usual evaluation for a patient presenting with nonvisible or nonpalpable IUD strings is to first probe the endocervical canal to see if the strings can be brought down with a cotton-tipped applicator. If there has been missed or irregular menses, a pregnancy test should be done. If the strings cannot be brought down, in most cases pelvic ultrasound will identify the IUD in the endometrial cavity. If there is a question as to whether the IUD is partially embedded in the uterine wall, sonohysterography or hysteroscopy may be performed next. If, however, ultrasound is unsuccessful in locating the IUD, a flat plate and upright of the abdomen should be performed to look for an extrauterine location of the IUD. In the case of an extrauterine IUD, surgical removal is indicated. In removing an embedded IUD from the endometrial cavity with a grasping instrument or by hysteroscopy, prophylactic antibiotics should be considered. Also, when doing a laparoscopy for an intra-abdominal IUD, prophylactic antibiotics are recommended.

CONCLUSIONS

In this case, it is possible that the patient may have been saved many years of pain if the perforation had been diagnosed at the time it occurred. It is important that the possibility of uterine perforation be considered in anyone who has had a diagnosis of an expelled IUD without actual confirmation that the IUD is no longer present in the body. In any woman who presents with pelvic pain and a history of a "lost" IUD, the surgeon should have a high index of suspicion and obtain radiological studies. It may be advisable to question women about possible IUD use when presenting with pelvic pain of unknown origin.

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